1-5.

**DILLINGHAM HARBOR, ALASKA**
(CWIS NO. 04800)

Condition of Improvement 30 September 2000

**AUTHORIZATION:** Rivers and Harbors Act, 3 July 1958 (House Doc. 390, 84th Congress, 2nd Session) as adopted, provides for a small boat basin along Scandinavian Creek of 230,000 square feet at 2 feet above MLLW, an entrance channel 1,100 feet long with a bottom width of 40 feet in Scandinavian Creek, a sheet-pile sill across the basin outlet with a top elevation at 7 feet above MLLW, and an embankment on three sides of the basin to provide protection from the wind.

| **EXISTING PROJECT:** | LENGTH | DEPTH | WIDTH |
|---|---|---|---|
| ?? Basin | 700 ft | +2 ft | 650 to 800 ft |
| ?? Entrance Channel | 1100 ft | varies | 40 ft |
| ?? Rock Sill | N/A | +7 ft | N/A |

**PROJECT USAGE:** The harbor provides half-tide access and all-tide moorage for about 320 commercial fishing and recreational craft. Commercial salmon fishing is the cornerstone of the community's economy; subsistence hunting and fishing continue to be vital local activities. Dillingham Harbor provides both moorage and an alternate landing area for lighterage vessels. All transportation to the area is by water or air.

**PROGRESS OF WORK:**

1960 - Dredging of the basin begins in September and continues until freeze-up in November. The project is 52% complete.

1961 - Design modifications change the sheet-pile sill to a rock sill and move the embankment back from the basin. Dredging of the basin is resumed in May and completed in October. The rock sill is only partially completed; damage by ice occurs during the winter months.

1962 - The basin is found to be silted in. Restoration of the rock sill and dredging of the basin commences in May. The project is completed in July.

1963 - The depth of the project is reduced from +2 feet to +7 feet MLLW due to siltation.

1964 - Maintenance is suspended pending restudy of the project.

1966 - A study of the siltation problem is completed in September.

1967 - A General Design Memorandum is completed and submitted for approval.

1968 - A supplemental design memorandum is approved authorizing re-excavation to project depth and the purchase of a Corps owned dredge.

1969 - Dredging commences in June and continues through October by the Corps' pipeline dredge "Dillingham".

1970 - From this year forward annual maintenance dredging is carried out from May through October as required.

1978 - From this year through 1988 all dredging is performed by the "Dillingham".

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1989 - Beginning this year maintenance dredging is accomplished annually by contract.
1993 - Sampling and testing is conducted on the harbor sediments.
1994 - The Corps' project office is leased to the National Guard for a five year period.
2000 - Maintenance dredging removes 76,475 cubic yards from the basin area.

| **COST TO DATE:** | New Work | Maintenance | Total |
|---|---|---|---|
| United States Funds | $ 644,724 | $ 10,522,386 | $11,167,110 |
| Contributed Funds | -0- | $ 1,700 | $ 1,700 |
| Total Costs | $ 644,724 | $ 10,524,086 | $11,168,810 |

| **RANGE OF TIDE:** | Mean Range | Diurnal Range | Extreme Range |
|---|---|---|---|
| | 15.9' | 19.8' | 30.0' |

**CONTROLLING DEPTH:** A depth of +0.4 feet MLLW controls in the south central portion of the basin, and a depth of +2.3 feet MLLW appears to control in the project entrance at the end of the 2000 dredging season. This project is subject to rapid shoaling due to sedimentation from Nushagak Bay.

**DREDGED QUANTITIES AND CONTRACT COSTS**

| ITEM | FY 1996 | FY 1997 | FY 1998 | FY 1999 | FY 2000 |
|---|---|---|---|---|---|
| QUANTITY CUBIC YARDS | 86,329 | 98,166 | 91,593 | 72,769 | 76,475 |
| CONTRACT COST | $275,500 | $310,410 | $300,925 | $299,199 | $274,418 |

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**MAINTENANCE DREDGING SUPPLEMENT:**

**A. General**

1. Dillingham small boat harbor is an annual dredging project under a two year contract; Ninilchik and Homer are awarded under the same contract.
2. Shoaling is heavy throughout the basin area and the upper entrance channel.
3. The window for dredging activity runs from 1 May to 30 June, but in actuality dredging activity occurs from "ice out" to an early completion about the end of the first week in June to avoid conflicts with the salmon fishing fleet.
4. Dredging is accomplished with an hydraulic cutterhead and pipeline suction dredge which conveys the effluent to an adjacent upland disposal site.

**B. Sampling & Testing**

1. Three sites from the harbor and a composite sample from the disposal site, in May 1992, were classified as silt (ML); the inner most harbor sample was classed as silt with sand (ML).
2. Chemical analysis was performed using (6) test methods as outlined with results below:

| | | |
|---|---|---|
| Method 415.1 | Total Organic Carbon | 1.88 - 3.74 ppm |
| Series 6000-7000's | (8) RCRA Metals | (5) of (8) detected, all well below management levels |
| Method 8270 | Semi-volatile Organics | Fluoranthene, 1.7 ppm* others below management levels |
| Method 8080 | Pesticides and PCB's | none detected |
| Method 8240 | Volatile Organics | all below management levels or not detected |
| Method 160 | Percent Solids | 32.5 - 60.7 % |

* Sample location north of Federal limit; concentration at lower management threshold.

**C. Disposal**

1. The effluent is conveyed via portable pipeline from the dredge plant to an upland, bermed disposal site. Outflow is controlled through a small adjustable outlet structure; fines area widely dispersed throughout the site.
2. The primary disposal area is located immediately to the east of the basin covering approximately (10) acres with its center at 59?02'19.7"N latitude and 158?28'13"W longitude. An alternate upland site is located immediately to the west of the basin covering about (7) acres with its center at 59?02'20"N latitude and 158?28'38.4"W longitude.
3. After the conclusion of the dredging in 1995 the northern half of the eastern site (previously 20 acres) was designated for use as a boat storage and maintenance area. Work is underway to permit a new western disposal site to handle future dredge spoils.

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**D. Environmental Permits and Reports**

1. A Final Environmental Impact Statement (FEIS) was published in June 1974; an Environmental Assessment was completed in November 1979.

2. The following permits or authorizations were issued by agency below:

| Agency Name | Date of Issue | Date of Expiration |
|---|---|---|
| EPA | Nov 79 (prelim) | n/a |
| ADF&G | 19 Oct 90 | n/a |
| ADGC | 27 Jan 89 | n/a |
| ADEC | n/a | Apr 89 |

3. Water Quality: Five physical parameters were measured at three locations in the harbor, May 1992; temperature, pH, salinity, conductivity, and oxidation-reduction potential were measured in the field. No chemical analysis was conducted.